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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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LeMoine Patent Services, PLLC
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Minneapolis, MN 55402

EXAMINER

AKINYEMI, AJIBOLA A

ART UNIT	PAPER NUMBER
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2618

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08/04/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/813,992	Applicant(s) FRANCA-NETO ET AL.	
	Examiner AJIBOLA AKINYEMI	Art Unit 2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 April 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3 and 7-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3 and 7-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 April 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>NONE</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dewitt (Patent No.: 3727147) and further in view of Carroll (patent No.: US 3972020).

With respect to claim 1:

Dewitt teaches an apparatus comprising a common mode rejection amplifier (fig.3, item 100), a plurality of low pass filters (fig.3, item 1-7) coupled to a common mode rejection amplifier (fig.3, item 100) to produce a band pass amplifier response wherein the plurality of low pass filter comprise first, second , third and fourth filters. A common mode rejection amplifier that includes two parallel coupled differential input stages coupled to the plurality of low pass filter (fig.3). Dewitt differs from claim invention in that an input stage having first and second differential outputs and plurality of low pass filter

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coupled to the input stage are not disclosed. Carroll disclosed two input stage (fig.2, item 60, 62) and this input stage are couple to filter. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have two input stage couple to a filter and to the common mode rejection amplifier in order to reject portion of the difference mode noise lying outside the signal passband.

With respect to claim 8:

Dewitt teaches an apparatus comprising first and second, third and fourth filters (fig.3), a differential amplifier with two parallel input stages coupled to the first, second , third and fourth low pass filter (fig.3, item 100). Dewitt differs from claim invention in that first and second filters are not connected to first input stage, third and fourth are not connected to second input stage. Carroll teaches an apparatus whereby the first input stage (fig.2, item 60) is connected to a filter which can be first and second filter and second input stage (fig.2, item 62) connected to a filter which can be third and fourth filter (fig.2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have two input stage couple to a filter and to the common mode rejection amplifier in order to reject portion of the difference mode noise lying outside the signal passband.

4. Claims 3, 7, 9, 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dewitt (Patent No.: 3727147) and further in view of Carroll (patent No.: US 3972020) and Isberg (Patent No.: 6029052).

With respect to claim 3 and 9:

Dewitt teaches an apparatus comprising a plurality of low pass filters (fig.3, item 1-7) coupled to a common mode rejection amplifier (fig.3, item 100) to produce a band pass amplifier response. Carroll teaches a an apparatus whereby the first input stage is connected to a filter which can be first and second filter and second input stage connected to a filter which can be second input stage (fig.2). Dewitt and Carroll differ from claim invention in that one of the filters does not have a programmable response. Isberg teaches a filter with programmable response (col.5, line 27-32). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used a filter with programmable response. Modifying Dewitt with Carroll and Isberg invention will help in easy implementation so as to further simplify the circuitry.

With respect to claim 7:

Dewitt teaches a plurality of low pass filter which are parallel to each other (fig.3), it is obvious that combination of plurality of LPF will make a single low pass filter which can have a corner frequency and combination of other would make a single LPF with another corner frequency as in (fig.4, col.4, line 1-24).

With respect to claim 14:

Dewitt teaches an apparatus wherein the P1 and P2 which can also be represented by LPF1 and LPF2 exhibit a frequency corresponding to the corner frequency of a band pass response and P6 and P7 which can also be represented by LPF6 and LPF7 exhibit a frequency corresponding to a second corner frequency of the band pass filter (col.6, line 3- 23).

5. Claims 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dewitt (Patent No.: 3727147) and further in view of Isberg (Patent No.: 6029052) and Fanous (Pub. No.: US 2003/02060663A1).

With respect to claim 10:

Dewitt teaches an apparatus comprising a plurality of low pass filters (fig.3, item 1-7) coupled to a common mode rejection amplifier (fig.3, item 100) to produce a band pass amplifier response. Carroll teaches an apparatus whereby the first input stage (fig.2, item 60) is connected to a filter which can be first and second filter and second input stage (fig.2, item 62) connected to a filter which can be third and fourth filter (fig.2).

. Dewitt and Carroll differ from claim invention in that automatic gain control circuit is not taught. Fanous teaches automatic gain control circuit having a transistor to shunt a pair of differential output node from the differential amplifier (fig4, item 454). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have AGC to shunt a pair of differential output node. Modifying Dewitt with Carroll and Fanous invention will help in controlling the voltage at the output node of the differential amplifier.

With respect to claim 11 and 12:

Fanous further teaches an automatic gain control coupled to sense a voltage on the first and second differential input nodes (fig.4).

With respect to claim 13:

Famous teaches an apparatus comprising an input amplifier coupled to receive an input signal and to drive the first and second differential input nodes (fig.4, item 408).

Response to Arguments

4. Applicant's arguments with respect to claims 1 and 8 have been considered but are moot in view of the new ground(s) of rejection. Regarding claim 1 and 8, applicant has amended claim 1 and 8 to include new limitation, the examiner has rejected these claims limitation based on the new reference (Carroll) reference. Dewitt disclosed two input differential stage into amplifier 100 in (fig.3, item 104, 106), this two input are coupled to LPF and are parallel to each other. The examiner has rejected the limitation "input stage having first and second differential outputs" in independent claim 1 with Carroll reference (see fig.2, item 60 and 62).

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to AJIBOLA AKINYEMI whose telephone number is (571)270-1846. The examiner can normally be reached on monday- friday (8.30-5pm) Est.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, YUWEN PAN can be reached on (571) 272-7855. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/Yuwen Pan/

Primary Examiner, Art Unit 2618